The Computer Science Graduate Program

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Good News

- Exciting research
  - World-class research groups in Storage Systems, Graphics/Scientific Visualization, Machine Learning, and others
  - Major efforts in Software Engineering and Database Systems

- Wonderful people
  - Excellent faculty and staff
  - Outstanding students

- Fantastic location
  - Climate, ocean, forests, hiking trails, Boardwalk, …

Computer Science Department

- Medium-sized department:
  - 19 regular faculty, 3 research faculty, 5 lecturers
- Largest graduate program on campus
  - ~140 graduate students
  - 2/3 Ph.D., 1/3 MS
- Strong focus on research
  - Research concentrated into 7 areas
  - All grad students participate in research
- Excellent prospects
  - Academia: Berkeley, Cornell, Johns Hopkins, Pitt, …
  - Industry: Google, Yahoo!, Symantec, HP Labs, …

CS Research at UCSC

- **Computer Systems**
  - Distributed systems, operating systems, storage systems, real-time systems
  - *Faculty: Scott Brandt, Darrell Long, Ethan Miller, Carlos Maltzahn (Research)*

- **Algorithms, Logic, and Complexity**
  - Logic, computational complexity, threshold phenomena in random graphs
  - *Faculty: Allen Van Gelder, Dimitris Achlioptas*

- **Database Systems**
  - Data provenance, distributed databases, query optimization, XML data management
  - *Faculty: Wang-Chiew Tan, Alkis Polyzotis, Phokion Kolaitis (on leave), Arthur Keller (Research)*

- **Machine Learning and Artificial Intelligence**
  - Machine learning, on-line learning, game theory
  - *Faculty: Manfred Warmuth, David Helmbold, Ira Pohl, Bob Levinson*

CS Research at UCSC (cont.)

- **Graphics, Animation, and Scientific Visualization**
  - Computer-aided geometric design, scientific visualization, acquiring and manipulating complex graphical models
  - *Faculty: Suresh Lodha, Alex Pang, James Davis*

- **Security**
  - Computer and network security, specification and verification methods, storage system security
  - *Faculty: Martin Abadi, Ethan Miller*

- **Software, Web, and Internet Engineering**
  - Configuration management, hypertext versioning, programming languages analysis and defect detection, Go
  - *Faculty: Jim Whitehead, Cormac Flanagan, Charlie McDowell, Martin Griss (Research)*

- **New: Interactive Game Engineering**
  - Interactive game technology and engineering
  - *Faculty: Michael Mateas*

My Research

- <u>Storage Systems</u> (*Brandt, Long, Miller, Maltzahn*)
  - Peta-scale storage
  - Object-based storage systems
  - Predictive/adaptive storage management
  - New storage technologies
- <u>Real-Time Systems</u> (*Brandt*)
  - Adaptive soft real-time
  - Dynamic integrated real-time systems
  - Storage Quality of Service
- Working with me
  - 3 Ph.D.s + ~6 current Ph.D. students
  - 9 M.S.s
  - Collaboration with Intel, NetApp, IBM, LLNL, LANL, Sandia, ...
  - Student internships with IBM, HP, NetApp, Symantec, Intel, LLNL, LANL, ...

Academic Requirements

- Graduate degrees offered: M.S, Ph.D.

- Coursework
  - Research and Teaching in CS&E (3 units)
  - Core: Algorithms, Languages, Architecture
  - Breadth: 3 courses in 3 different areas
  - Electives: 3 or 4 other courses (can be research)

- M.S.: 9 classes + M.S. project or thesis

- Ph.D.: 9 classes + Ph.D. dissertation

More Information

- http://www.soe.ucsc.edu

- http://www.cs.ucsc.edu

- CS Faculty (someone@cs.ucsc.edu)

- Grad Secretary: Tracie Tucker (ttucker@cs.ucsc.edu)

- Grad Director: Scott Brandt (scott@cs.ucsc.edu)